

Work Order ID 57660

April 13, 2010 3:11:03 PM



Page 1

Item ID: D6008-132

Accept



Setup Start



Revision ID:

Item Name: Crosstube extrusion

Stop



Start Date: 4/13/10 Start Qty: 5.00



Cust Item ID:

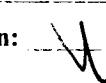
Required Date: 4/13/10 Req'd Qty: 5.00



Customer:

Reference:

Approvals: Process Plan:



Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr	Revision Nbr
D6008	Rev A

100



PURCHASING

Purchasing

Memo

0.00

C8 10/4/14 (5)

Purchasing

Issue P/O: 11650
HONE PER NCR 083

110



Receive & Inspect for Damage & Mat'l Certs

0.00

P10/4/14 (5)

Packaging

Memo

Packaging

Ensure material certification is attached

120



QC6- Inspect dimensions to drawing

0.00

P 10.04.16

QC

Memo

Quality Control

Ensure Material certification comply to Dwg D6005

REF DS EMAIL

W/O: 57660

WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10-04-16	121	CHEMICAL CONVERSION CONST PER QSI CUS 4.1	AWM	10-4-16	5		S solvent
	122	QC 3 inspect chemical const	S	10-04-16	45		S solvent

Part No: D6008-132 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Required Date: 4/13/10 Req'd Qty: 5.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
Description

130

Identify as per dwg & Stock Location: *L-6*Set Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Packaging

Memo

0.00

Packaging

RE-IDENTIFY USING NEW B/N

5 -- 10-4-19

140



QC21- Final Inspection - Work Order Release

0.00

QC

Quality Control

Memo

0.00

*10/04/2010**MK
10-4-20*

Picklist Print

April 13, 2010 3:11:02 PM

Page 1

Work Order ID: 57660



Parent Item: D6008-132



Parent Item Name: Crosstube extrusion

Start Date: 4/13/10

Required Date: 4/13/10

Comments: IPP Rev:A New Issue 07-06-18 JLM

Start Qty: 5.00

Required Qty: 5.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D6008-132		Manufactured	No				Each	5.0000	5.0000			

Crosstube extrusion

Warehouse Loc Qty Loc Code

Location

Main Warehouse

LG	5
50892	5

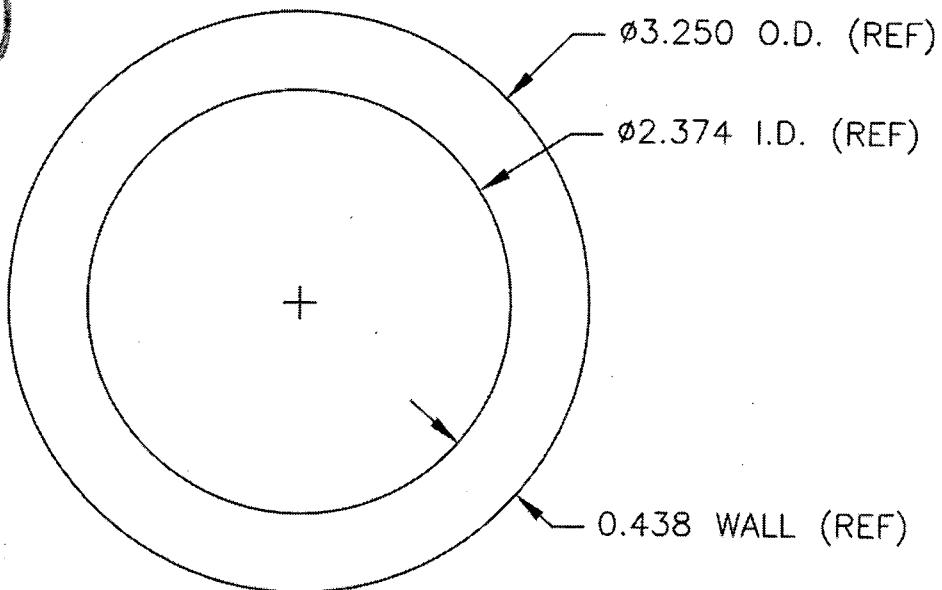
MF 10-4-20



DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D6008
DATE		REV. A SHEET 1 OF 1
00.11.17		SCALE 1:1
A	00.11.17	NEW ISSUE

SPECIFICATION CONTROL DRAWING

RELEASED
00.11.24 #



NOTES

1) D6008-XXX CROSSTUBE

LENGTH

CD1014112

W10: 57660

WHERE XXX IS LENGTH IN INCHES
EG. 180" LONG TUBE: D6008-180

- 2) MATERIAL: 3.250 OD x 0.438 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi
MINIMUM YIELD TENSILE STRENGTH = 66 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:
OD: ± 0.008 MEAN (± 0.016 INCLUDING OVALITY)
WALL: ± 0.020 MEAN (± 0.044 INCLUDING ECCENTRICITY)
LENGTH: XXX $+0.125/-0.000$
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

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MAR 29 2010

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CDN K6A 1K7 Hawkesbury
ON
Kandada

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fax +49 (0) 2303 206 116
info@alunnatubes.com
www.alunnatubes.com

page: 1
date: 03.22.2010
account: 40980

Proforma Invoice 49359a

your PO no.: PO10125
dated: 7.24.2009
your ref.:
order confirmation: 33209

contact:
phone:
fax:

representative:
your Vat no.:
our VAT no.:
Tax code:

Petra Eisenblaetter
+ (303) 755 5672
+ (303) 755 5936
Claus J. Better
DE177869055
316/5702/0535

**seamless extruded aluminium tubes, alloy EN AW-7075, temper T 6511,
according to ASM-QQ-A-200/11, tariff no. 76082081**

size
82.55 mm OD x 11.13 mm WT
69.85 mm OD x 7.95 mm WT

quantity
5 pcs.
5 pcs.

50.00 \$

invoice amount:

Commerzbank AG, Unna
Konto-Nr. 102 56 00 * BLZ 443 400 37
S.W.I.F.T. - Code: COBADE FF 443
IBAN: DE90 4434 0037 01025600 00

Sitz der Gesellschaft: Unna
Amtsgericht Hamm, HRB 3045

Vorstand: Volker Findeisen (Vors.), Thomas Wiese
Vorsitzende des Aufsichtsrats: Irene Wiese

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fax +49 (0) 2303 206 116
info@alunnatubes.com
www.alunnatubes.com

page: 1
date: 03.22.2010
account: 40980

Proforma Invoice 49359a

your PO no.:	PO10125	contact:	Petra Eisenblaetter
dated:	7.24.2009	phone:	+ (303) 755 5672
your ref.:		fax:	+ (303) 755 5936
order confirmation:	33209	representative:	Claus J. Better
		your Vat no.:	
		our VAT no.:	DE177869055
		Tax code:	316/5702/0535

**seamless extruded aluminium tubes, alloy EN AW-7075, temper T 6511,
according to ASM-QQ-A-200/11, tariff no. 76082081**

size	quantity
82.55 mm OD x 11.13 mm WT	5 pcs.
69.85 mm OD x 7.95 mm WT	5 pcs.
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Commerzbank AG, Unna
Konto-Nr. 102 56 00 * BLZ 443 400 37
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Sitz der Gesellschaft: Unna
Amtsgericht Hamm, HRB 3045

Vorstand: Volker Findeisen (Vors.), Thomas Wiese
Vorsitzende des Aufsichtsrats: Irene Wiese



Packinglist ALUUnna AG

Customer PO	33209/1
Unna ref. no.	PO10125
Date:	03.23.10

We hereby declare that the wooden packing material are totally free from bark and apparently

Boxmarking:

DART AEROSPACE D6008-132
P.O. : PO10125 Made in Germany
DEST. : HAWKESBURY ONT, CANADA

free from live plant pests.

Chris Provencal

From: David Shepherd [dshepherd@dartaero.com]

Sent: April 15, 2010 6:40 PM

To: 'Chris Provencal'

Subject: RE: NCR D6008

Hi Chris,

The marks appear to be at 45 degrees, are smooth, and are on the inside of the tube. The tubes are low gear, not high gear, and are therefore less susceptible to cracking or fatigue. Therefore, I believe these tubes are acceptable.

Regards,
David

From: Chris Provencal [mailto:cprovencal@dartaero.com]

Sent: Thursday, April 15, 2010 12:23 PM

To: 'David Shepherd'

Subject: RE: NCR D6008

Further, there are also some D6019 tubes that were honed (used on -105 / -107 xubtes), the D6008 is used on the -207.

From: Chris Provencal [mailto:cprovencal@dartaero.com]

Sent: April 15, 2010 2:01 PM

To: 'David Shepherd'

Cc: 'Mike Petsche'

Subject: NCR D6008

A while ago, we got a bunch of D6008 xtube extrusion that had little bumps all down the inner diameter of the tube. I believe you were made aware of that. They sent the tubes back to Alunna who had the tubes honed. We now have them back and you can see honing marks on the inside. The surface itself is very smooth and you can't feel the marks at all. However it doesn't meet the requirement of no circumferential grind marks. Photos attached.

-David

No virus found in this incoming message.

Checked by AVG - www.avg.com

Version: 8.5.437 / Virus Database: 271.1.1/2812 - Release Date: 04/15/10 06:31:00